

NASA TECH BRIEF

John F. Kennedy Space Center



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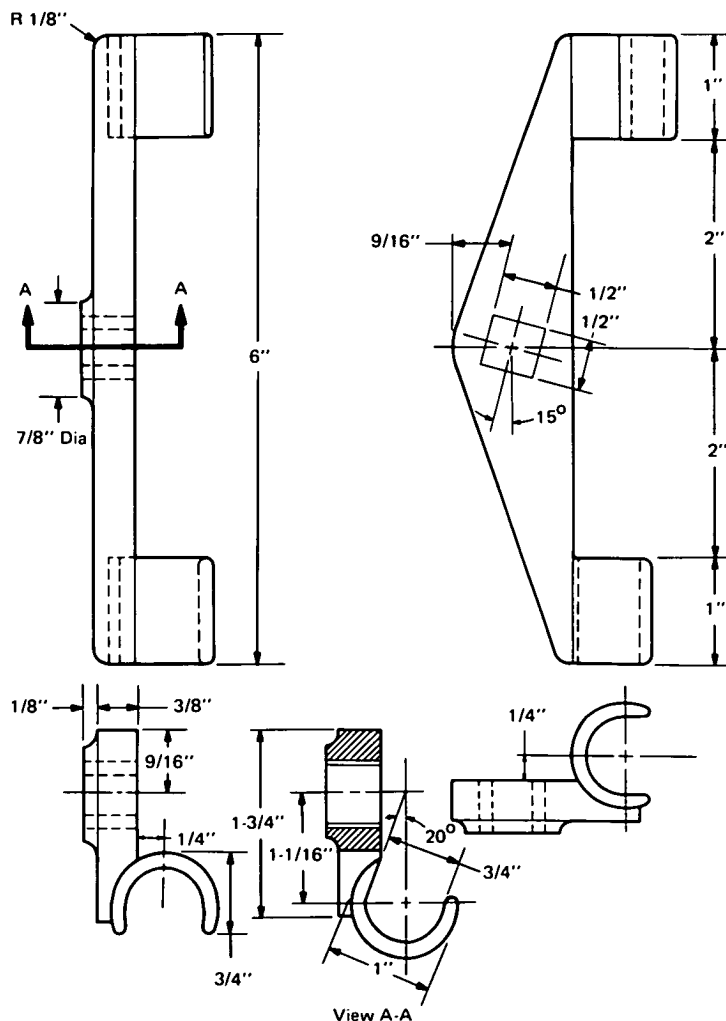
A Tool for Measuring Elevator Cable Tension

The problem:

Many elevators and some lifting systems are supported by a set of cables or ropes. To avoid uneven and excessive wear, each cable or rope should be adjusted to carry equal weight. However, present tools used for checking cable tension are complex, bulky, and costly.

The solution:

A simple tool was designed to measure relative cable tension. The tool used with a ½-inch (1.25-cm) drive torque wrench weighs approximately 2 pounds (1 kg) and can be produced at one-tenth the cost of the existing tools.



(continued overleaf)

How it's done:

The design, as shown in the figure, has two U shaped ends to grip the elevator cable along its length. A torque wrench with a 0-to-100-foot-pound (0-to-135.6J) capacity is then inserted into the tool socket and twisted to check the cable tension. Readings are taken with a C-hook holding the wrench handle a uniform distance from the cable. If tension is incorrect, the particular cable is adjusted by a thimble retaining nut. This process repeats until all of the cables are checked and adjusted to carry equal weight.

Note:

Requests for further information may be directed to:
Technology Utilization Officer
Kennedy Space Center
Code AD-PAT
Kennedy Space Center, Florida 32899
Reference: B72-10509

Patent status:

NASA has decided not to apply for a patent.

Source: E. Lowell Weaver of
Bendix Corp.
under contract to
Kennedy Space Center
(KSC-10708)